

## MECHANIZED RETRACTABLE PELLICLES AND METHODS OF USE

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### Abstract of the Disclosure

Apparatus and methods to protect a photomask that is used for semiconductor photolithography at wavelengths outside the visible spectrum include a pellicle that is readily retracted during exposure or to provide access to the photomask. The pellicle can be transparent at an inspection wavelength and opaque at an exposure wavelength. In various embodiments, the pellicle is slid, retracted, or pivoted relative to a base aligned with the photomask, thus uncovering the photomask. When overlying the photomask, the pellicle can be secured with magnetic elements, such as magnets or electromagnets. In another embodiment, the pellicle includes a diaphragm that can be opened or closed. Methods of using a pellicle are also described.

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